

A Framework for Sustainable Ecotourism: Application to Costa Rica

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ABSTRACT *Costa Rica is a small Central American nation that has gained an international reputation as a leader in environmental conservation. This has formed the base for its highly successful and lucrative small scale ecotourism industry. However, there are threats from high rates of deforestation and expanding large scale tourism that is trading on strong environmental credentials, so it is appropriate to conduct this policy analysis on such a significant ecotourism area. The paper develops an ecologically sustainable economic framework, drawing on the works of Adolph Lowe (1893–1995) and Michał Kalecki (1899–1970), to examine the Costa Rican experience and then analyse lessons for general policy development of any ecotourism area. The analysis is conducted from a political economy (and not a tourism management) perspective on the trade offs between small scale and large scale ecotourism.*

Introduction

Ecotourism has the potential to be a prosperous economic industry as well as delivering ecologically sustainable development to any region that has a unique natural environment. To guide effective ecotourism development, examination of the experiences of countries and regions with a strong ecotourism industry can be useful. Costa Rica ‘has become renowned as a destination for eco-tourists’ (Mowforth and Munt, 1998, p. 310). This paper explores the Costa Rican experience using a political economy policy framework and derives lessons for sustainable development of the ecotourism industry.

Initially the paper outlines the ecotourism paradigm within which this discussion resides. This is followed by a description of the political economy of ecotourism in Costa Rica in order to provide a setting from which to apply a distinctive policy framework. The next section sets up an ‘eco-sustainable framework’ which has been developed in Courvisanos (2005) from the work of two major political economists, Adolph Lowe and Michał Kalecki (both expressing ecological concerns more than 50 years ago). In this section, the framework is adapted for sustainable ecotourism. Finally, an analysis of the Costa Rican experience provides lessons to be considered in the development of ecotourism in general.

The Ecotourism Paradigm

Ecotourism is more than the well-known definition by Ceballos-Lascuráin as 'travelling to relatively undisturbed natural areas' (1991, p. 31) for its biological and cultural features. Ecotourism is about the preservation of the environment *and* promoting tourism such that the tourist does not harm the environment. This broader sustainable development definition of ecotourism is more in line with the definition of ecotourism provided by the International Ecotourism Society, as 'responsible travel to natural areas that conserves the environment and sustains the well-being of local people' (TIES, 2004). It is this latter definition that will be the one adopted throughout this paper.

While there is considerable lip service paid to ecotourism by the academic and political fraternities, there remains a significant gap between the theory of ecotourism and its practice on the ground. There is also a growing body of opinion that ecotourism is little more than a marketing tactic to attract more customers given its ubiquitous use by travel agents and sites to sell their wares to travellers who do not know better, while giving them the 'feel good factor' of having done their share for preservation of the environment.

Tourists, by their very presence, result in some degradation of the environment, however small this degradation may be. This presence creates a complex problem: the preservation of forests and nature needs scarce resources provided by ecotourists, who by their very presence and money alter the eco-system and society for ever. Ecotourism has the extremely difficult task of finding a balance between damage caused by tourists and ongoing preservation of the ecosystem for posterity (Buchsbau, 2004), a fine balancing act made famous by Costa Rica, one of the pioneers in the field. While there are no perfect answers nor a single model to implement a package for ecotourism, Costa Rica has, by extensive trial and error, demonstrated that at least some of its policies are bearing fruit.

Political Economy of Costa Rica

Costa Rica is a small Central American nation that has 'gained an international reputation as a leader in environmental conservation...over the last thirty years...developed a system of national parks and other protected areas which now cover a quarter of the country's land area' (Mowforth and Munt, 1998, p. 310). Costa Rica's unique rainforest attracts tourists from all over the world. Costa Rica has been generating a trade surplus on the basis of earnings from tourism and has become the country's most important foreign exchange earner. This is despite a growing current account deficit (Country Watch, 2004, p. 15).

The growth of ecotourism in Costa Rica has been greatly facilitated by the presence of institutions such as the Costa Rican Institute of Tourism (ICT), the Organization for Tropical Studies (OTS) and the National Institute for Biodiversity (INBio) which have helped to create Costa Rica's image abroad (Inman, 1998, p. 1). Other factors that work in Costa Rica's favour include the presence of a peaceful democratic government, political neutrality, a good climate, a large proportion of educated middle class, a central location close to its largest market, North America, and a complete range of environment-based stakeholders (or interest groups) intimately connected with the ecotourism industry. Inman (1998) reports that Costa Rica is benefiting because of product differentiation, education and provision of adventure sport activities.

Role of Government and the Public Sector

'Costa Rica's democratic political system and pluralist style of policymaking offer an arena in which to reconcile...divergent interests, although neither the legislature nor

the government is a neutral institution' (Silva, 2003, p. 118). This provides a sound basis for analysing the role of the various Costa Rican governments and the public sector in the context of the democratic control required by the framework outlined below.

Nature preservation came to the forefront during the administration of Daniel Oduber (1974–8), the founder of the country's national park system. Under Oscar Arias (1986–90) environmental conservation was extended to more than just national parks. Democratically elected governments from 1994 onwards, despite differing political backgrounds, have worked sequentially towards the common goal of broad sustainable ecotourism by the preservation of the local ecological diversity. The Figueres government (1994–8) in its first year was one of the first governments in the world to make sustainable development a central policy theme.

The Figueres government imposed a new carbon tax aimed at restoring tropical forests on idle cattle pastures; imposed a new electricity tax (with tax credits for efficient electrical appliances) to promote energy conservation; replaced a planned oil-fired electricity-generating facility with a new geothermal plant; halted development of a non-sustainable Pacific Coast resort hotel (*Papagayo* project); stopped construction of an environmentally hazardous paper mill and port at a sensitive location; committed itself to doubling the size of Costa Rica's national and wildlife reserves to about 25 per cent of the country's land area; supported INBio to catalogue Costa Rica's species; imposed a new petrol tax; encouraged selective farming, where the forest is used for marketable products rather than cut down; encouraged the preservation of privately owned rainforest and its use as an ecotourist destination (Tenenbaum, 1996). In relation to the last policy listed, the government supported a project where trams run over the canopy of the rainforest that provides an open overview of 'the green sward in all its glory...[that] opens the verdant visage for research as well as tourism without disturbing the micro-environment even the slightest' (Caragata, 1995, pp. 58–9).

A market-oriented approach to ecotourism and conservation was adopted. The government also created a market for tradable pollution permits, whereby foreign firms in Costa Rica whose operations in Costa Rica emitted greenhouse gases could buy pollution rights by paying Costa Rica for forest conservation. Silva (2003) argues that this tradable rights approach to the environment enabled both forest timber interests and conservation bodies to benefit at the expense of peasant organizations.

As a commitment to ecology and ecotourism, the ICT – a government authority embarked in 1997–8 upon the Certificate of Sustainable Tourism (CST) branding programme to cover all the tourism industry, beginning with the lodging/hotel sector. The programme seeks to categorize and then certify each tourism company that voluntarily agrees to this process. A rating is then given to each company on the basis of its operations and how they comply with a model of sustainability (Turismo Sostenible, 2004). The main objective of CST is to turn the concept of sustainability that is practical and necessary into the country's tourist competitive advantage, with the aim of improving the direction in which natural and social resources are utilized, motivating active participation by local communities and supporting the competitiveness of the business sector.

The subsequent administration of Miguel Rodríguez (1998–2002) maintained the environmental policies of the previous administration and strengthened them. Two major initiatives were: (1) monies generated by major hydro-electric projects were set aside for the primary conservation of forests; and (2) the banning, after extensive local consultation, of any further oil exploration by the American oil company Harken (EIU, 2003).

The current government of President Abel Pacheco (2002–present) has continued the strong pro-environmental policies of the two previous administrations. Programmes like

CST and institutions like INBio and OTS have become prominent. This new government has also rejected plans from another oil firm, Malon, to set up an oil industry that would have damaged the ecology of the oil refinery site (EIU, 2003). When it came into power, the Pacheco administration indicated its desire to widen the environmental policy agenda with an extensive plan to 'transform Costa Rica into an ecological power' (Taylor, 2002). To support this, it stopped two Canadian firms from starting their open-pit gold-mining projects (preferring to pay compensation now rather than clean up the environment later), cracked down on illegal logging and designated a new national parkland (Taylor, 2002). Thus, in terms of democratic control, the biodiversity conservation approach identified by Silva (2003) has continued through all the administrations. The Figueres government set up the ecotourism ecological blueprint that all governments since then have broadly followed.

Segura-Bonilla (2003) reports on significant forest innovation in Costa Rica in the last decade that has been brought about through the establishment of strategic alliances between large pharmaceutical companies (e.g. Merck, BioCatalysis, INDENA, British Technology Group, AnalyticCon, Givausane Roure Academis) and universities (e.g. the universities of Massachusetts, Strathclyde, Guelph). Major multinational companies have realized that it is necessary to preserve the Costa Rican ecology, which delivers successfully the economically important ecotourism industry.

Social Outcomes

Silva's (2003) analysis of government policies on biodiversity conservation during the 1990s and early 2000s shows neglect of social equality. Increasing reliance on market mechanisms for the funding of forests has left small landholders and peasants without much state support by way of credit, budget and trust funds specifically allocated for their use. This reveals little interest in integrating the satisfaction of people's basic needs with biodiversity conservation. Neglect of the livelihood of peasants, Silva (2003) argues, leads to neglect of social equality as a component of sustainable development. Also, Costa Rica has achieved notoriety by the increase of sexual tourism (EIU, 2003).

Community participation in the planning process is a *sine qua non* of ecotourism. However, decisions affecting communities are most often made by bureaucrats with little or no understanding of the impact of the decision on the community. Additionally, private companies rarely ask the opinion of the community in their planning for the area (Wearing, 2001). This leads to the neglect and lack of support from environment-based stakeholders in the local communities. Ecotourism can result in the disintegration of local communities' social and cultural structure (Stem *et al.*, 2003). This is also contributed to by the poor availability of training and finances for locals to obtain the correct skill set to obtain the high-paying jobs in ecotourist projects, which are then taken by outsiders. Banks and government policy also discriminate against the local poor by using traditional measures to assess the credit rating of the local poor (Wearing, 2001).

Economic and Ecological Outcomes

As a result of the initiatives described above, over the last 20 years tourism and ecotourism have become big export earners for Costa Rica. Tourism receipts grew from US\$431 million in 1992 (Costarica.com, 2006) to US\$1,551 million in 2005 (*Latin Business Chronicle*, 2005). The number of tourist arrivals increased from 811,000 in 1997 to 1,113,000 in 2002, 45.8 per cent from Canada and 37.9 per cent from the USA (EWO,

2004). ICT estimates that tourist spending per international tourist was US\$971 in 1999 (Roe *et al.*, 2004). Average rent retention in Costa Rica from tourists has been 40 per cent (Stem *et al.*, 2003), a figure that is higher than in most other similar destinations. The result of this high rent retention is people benefiting from increased income and infrastructure improvements (Stem *et al.*, 2003). The non-economic benefits of this activity include ideas exchange and training opportunities.

In ecologic terms, the increased area of land set aside for national parks is a huge gene pool of the more than 500,000 species that inhabit it. The above measures aim to have forests harvested in a controlled, sustainable fashion in support of the tourist, chemical, pharmaceutical and genetic industries. These measures will be seen to be successful *if* they result in raising both gross domestic product and forest cover, while reducing lake and river siltation, reef destruction and fishery depletion. It is too early to assess these long-term goals.

The Eco-Sustainable Framework

An economic framework will be used to analyse Costa Rica's experience in developing an ecotourism industry. The resulting analysis could then provide lessons for regions that aim to advance their own ecotourism industry. This framework has to be both broadly rational in economic terms and also ecologically sustainable in handling the ecological dilemmas that arise.

The 'eco-sustainable' framework begins with an identifiable *goal*, which in Costa Rica's case is a deeper, more sustainable ecotourism market. The framework then enables a strategy of public intervention to be developed in order to implement the goal which has potential for economic success. Public intervention is required to ensure that an ecosystem perspective is applied so that the market is ecologically sustainable. This is essential in ecotourism, since too rapid an economic success without the ecosystem perspective will end up destroying the basis of its inherent economic success – the ecological system. This is the systemic and market failure basis for a goal-oriented public policy framework.

The eco-sustainable goal used in this analysis is based on the policy perspective definition of sustainable development adopted by Vercelli: 'development could be considered sustainable only when future generations are guaranteed a set of options at least as wide as that possessed by the current generation' (1998, p. 268). The framework outlined is based on two analytical perspectives, one on how to set up a strategy for development (Lowe) and the other a guide to implementing such a strategy (Kalecki). For a detailed account of this framework in terms of sustainable development and the appropriate policies required, see Courvisanos (2005).

First is Adolph Lowe's 'instrumental analysis' as a way of using 'instruments' to achieve agreed goals. Lowe (1976) established an analytical framework designed to enable rules of formal logic to be applied to economic cause and effect sequences over historical time. This framework is particularly aimed at using such cause-effect principles to set up state structural adjustment policies. For Lowe, this involves 'the search for the economic means suitable for the attainment of any stipulated end. To this procedure I have assigned the label of instrumental analysis' (1976, pp. 11–12). Forstater (1999) calls this the 'working backwards' approach. The objective in this paper is to develop the framework in order to deliver a sustainable, equitable and ecologically supportive economic environment. This *eco-environment* is the stipulated end.

Lowe's own ecological concern is clearly evident from early on in his writings and then he later makes an explicit attempt 'to incorporate environmental factors into his analysis'

(Forstater, 2004, pp. 22–24) The position taken by Lowe in these later works is to argue that industrial progress and the new technological revolution cannot continue to deliver sustainable economic growth rates that governments desire and corporations strategize over in advanced capitalist economies. Policy-makers can use Lowe's own instrumental analysis to assist in achieving economically sustainable ends by weaving a strategic innovation policy regime that is strongly ecologically sensitive. Such a strategy could build on the recent political shift in advanced economies for public innovation policies that guide business towards stronger competitive advantage.

Public policy instrumental analysis needs to concentrate on investment, which is the central element of any path to economic growth. Private corporate investment strategy that is best suited to innovation needs a stable business environment (Kay, 1993). This dilemma between growth and stability is based on the complexity of economic systems. It clearly points to the need for investment in infrastructure, with ecological and social amenities, through state structural adjustment policies that set the practical path of sustainable economic development that is followed by private investment (Moore, 1999). Thus, in the context of sustainable development, market-based economic regions or nations that lack a relevant state structural adjustment policy with sustainable supportive physical and social infrastructure will have insufficient order and coherence to impel the creation of innovative ecologically sustainable investment projects by the private sector.

Second is Michał Kalecki's 'perspective planning' (1986). This is incorporated into the framework to provide a strategy that establishes community motivation and voluntary conformity towards ecologically appropriate goals. A path of diffusion of new technology systems needs to be established that is conducive to innovation for a sustainable physical environment. This requires long-term investment strategies to have an incrementally adjusting (perspective) planning approach. To achieve this it is necessary to establish specific practical short-term goals to induce innovation that eventually adds up to the long-term goals specified. The plan must be continually assessed at every short-term end-point to see whether it is necessary to revise the goals and the strategy for reaching the broad-based long-term scenario. A perspective plan with these goals is set up to form a specific ecotourist plan in consort with agreed ecological 'rules' that deliver the type of ecological sustainability determined by 'instrumental analysis'.

In Kalecki's planning approach, there are two specific resource-saving parameters that provide ecological-efficient criteria for rules formulation (Kalecki, 1993, pp. 14–20). One is the coefficient of real depreciation, the aim of which is to reduce this coefficient by proper maintenance and repair systems for equipment and infrastructures. The other is the coefficient of better utilization of existing productive capacity. Together these two resource-saving coefficients provide a sound basis for ecological rules in a sustainable ecotourism strategy. The growing trend towards 'responsible tourism' reflects how both these parameters become more significant at a time when the business marketing imperative to look more environmentally sustainable has created a superficially beneficial label, which Hunter Publishing (2004), in their guide to Costa Rica, call 'green washing'.

Barbier (1989) develops some ecologically sustainable rules that could form the basis of any Lowe-Kalecki plan. These rules deal with rates of both exploitation of natural resources and generation of wastes that specific ecosystems can assimilate for long-term 'carrying capacity' sustainability. The problem for economists is not just that different 'stakeholders' (or interest groups) in ecotourism use alternative critical load-carrying-capacity measures, but also the contentious nature of the definition of and evaluation of carrying capacity for an environment and an ecosystem.

Hoffmann (1998) provides a useful breakdown of various carrying-capacity measures adopted in ecotourism practice: (1) *physical* capacity as the absolute limit on tourist

numbers that a resource can cope with; (2) ecological or *real* carrying capacity as the level of visitation beyond which unacceptable ecological impacts will occur, either from the tourists or from the amenities they require; and (3) social or *effective* carrying capacity as the level beyond which unacceptable change occurs in the effective delivery of the tourist service, altering the social behaviour of the local community and causing dissatisfaction (like overcrowding) to the tourists. These various carrying-capacity measures are related to the supply of ecotourism, with the threshold capacity rising as one progresses from the physical to the real and then to the effective. Large business interests tend to support (1), while small local-based businesses, public environmental bureaucracies and ecologists tend to support (2). Direct service providers 'on the ground' (e.g. rangers, local environment groups, low-impact ecotourist services) tend to support (3). Kalecki's resource-saving coefficients can be applied to all three capacity measures.

The perspective planning approach needs first to set up a dialogue between all stakeholders on how to achieve a strongly integrated ecotourist market in any region using structural adjustment policies that plan to alter the economic base of the region. The aim is not 'end-of-pipe' solutions to ecotourism build-up, but instead an innovative proactive set of actions that significantly alter the operation of ecotourism using all the tools available in the new information technologies (IT). This requires understanding of the possible means to develop the industry with IT and an appreciation of the value of all three carrying-capacity indicators as rules for monitoring, evaluating and developing each stage in the plan. Networking between all the stakeholders over the goals, means and their assessment must be rapid and continuous. Then meetings need to be arranged where constructive dialogue concentrates on means of achieving the goals based on data available and rules used to assess these data. Once a plan has been developed and established, there must be continual re-evaluation of these rules over time so that they are not static and they reflect latest innovative technological changes.

Economists writing on the physical environment recognize that all attempts to incorporate ecological concerns depend on judgements, whether via market price optimization or through the precautionary democratic processes suggested by this framework. Hodge explains that to have confidence in the effectiveness of any rules 'any prescriptions will have to embrace a wide range of capital assets and precautionary rather than optimising approaches have to be adopted' (1995, p. 56). The planning system behind any established rules provide a level of confidence that induces innovation in ecotourism, leading to revisions both in carrying capacities and economic growth for future iterative re-evaluations of the perspective plan.

Since it is impossible to define with any certainty what sustainability requires, a risk-averse ecotourist strategy needs to be introduced initially, and one not based on a static optimizing (and optimistic) cost-benefit comparison supported by neoclassical mainstream economists. This precautionary approach points to the use of the *effective* carrying-capacity rate as the critical ruling measure. Over time what sustainability requires is a 'shifting target' that depends on IT becoming available and on changing attitudes and expectations adopted through democratic public control. This implies grass-roots input from the people who understand and operate within the fragile ecosystem together with the ability to influence directly the goals and means used to develop the ecologically sensitive economy (Hodge, 1995, p. 56).

In achieving the sustainability objective, Hoffmann (1998) argues for strategic alliances between the stakeholders. There are vast ideological and business differences between all the stakeholders, especially with regard to their support for different carrying-capacity rules. Under these conditions, it seems that alliances across all stakeholders will be very tenuous, if not impossible. Democratic control requires networking across

all parties, but then decisions on the plans and implementation must be arrived at by majority support.

Borrowing from the 'cumulative causation' literature (Ricoy, 1987), this framework provides opportunity for the growth of effective demand (or 'willingness to pay') based on certain sustainability rules that establish certainty within which innovative ecotourism can flourish. Cumulative causation describes the situation in which there is a snowball effect in demand – the market grows on the basis of smaller successes in the past (i.e. 'from little things big things grow'). In the context of ecotourism, such an ecological framework provides confidence for ecotourists to know that their tourism experience will be supportive of local ecological and social environments without fear of 'green washing'. Market share for ecotourism will thus grow cumulatively. Continual iterative re-evaluation of the ecotourist plan encourages further innovation that leads to more acceptable and internationally competitive sustainability rules with stronger follow-up ecotourist demand. This creates 'self-reinforcing internal dynamics' that induce strong international competitiveness and greater growth and employment within the ecotourism industry world-wide.

In summary, this framework has three crucial elements:

1. Ecological rules that ensure capital investment is resource-saving with long-term carrying capacities which are sustainable
2. Perspective, flexible and risk-averse ecotourist strategy with democratic control
3. Cumulative effective demand that establishes a strong market share.

Having begun with economic principles that are goal-oriented towards ecologically sustainable environments, the three elements above ensure a robust framework from which to analyse the Costa Rican ecotourism experience. 'Working backwards' from stated ecological goals with these three elements incorporated provides a unique approach to ecotourism.

Framework Analysis: Lessons from Costa Rica

Using the eco-sustainable framework, the Costa Rica experience described earlier is examined for lessons in ecotourism development. Analysis is conducted at the three-element level identified in the framework, to provide a critical response to the broad thrust of policies in Costa Rica from both the public and private sectors.

The first element is the establishment of ecological rules in ecotourism that allow for resource-saving and sustainable carrying capacities. There is a problem in setting long-term carrying-capacity rules from the increasingly market-oriented approach adopted by Costa Rican governments. In Costa Rica, the Guayabo National Monument (217 hectares) is the most significant archaeological site in the country. Inadequate government funding has led to severe deterioration of the site. A rigorous study, reported on by Mowforth and Munt (1998, pp. 107–8), measured carrying capacity of the site and three different measures of carrying capacity were calculated: physical (2.8 m visits per year), real (1.04 m) and effective (0.27 m). Promotion of the site is reflected by the measure used. Long-term sustainable ecotourism would suggest the use of *effective* carrying capacity as the crucial rule, which would also allow significant resource-saving by reduced depreciation and more proficient utilization. Given the very much lower usage rate implied in this rule, powerful economic interests support the *physical* capacity rule. In this context, the very positive sustainable ecological programmes of Costa Rican governments since 1994 have been severely marred by pressures to use carrying capacities that support large-scale ecotourism.

Applying Kalecki's resource-saving parameters requires the spread of ecotourism numbers over a much broader range of natural environment sites, which can come only with strict carrying-capacity rules being enforced with a management plan to redistribute ecotourists. This can work with low-budget ecotourists, with their ecological concerns and interests, who could be persuaded to investigate other significant lower carrying-capacity sites. Mass ecotourists, who aim for the major tour sites, are less inclined or able to be influenced along these lines. Any limiting of tourists to the most significant sites will greatly affect major tourist operators who depend on these big sites to attract customers.

The second element is the risk-averse and democratically based strategic ecotourist plan. Ecotourism sites tend to start with the same foundation of a locally oriented, small-scale and community-based network of tourist-related businesses and environmentalists. As in Costa Rica, they all operated initially out of the various tourist sites, but with no effective networks or strategic alliances, and lacking any integration to assist in the democratic input into a strategic plan for the ecotourist industry. Early on in the evolution of the ecotourism industry in a region there tends to be no large powerfully based mass tourism sector to influence the outcome of any *ad hoc* actions. In Costa Rica there was only a limited supply of large-scale luxury hotels until the mid-1980s. Such a base could be informally networked through their primary concern for the environment. Thus, all tourism-based plans could be developed to be risk-averse in order to ensure *effective* carrying capacities of the sites are taken as limits to tourism.

A combination of two factors altered this foundation: an influx of foreign large-scale projects into the ecotourism sector and an ecologically risky market-oriented tourism strategy plan. Robust investment in large-scale tourist resort projects by major international consortia has been made in an effort to provide the mass international tourist market with a destination enjoying an international reputation as a leader in environmental conservation. The Figueres government recognized the need for a broad strategic management plan to handle the influx of investment projects and the rising tourist numbers (as evidenced in the lack of a plan at the Guayabo National Monument). This was certainly needed, but, by the time the plan was framed, the political and economic power of foreign capital and large domestic capitalists had altered the parameters. The plan was based on much larger and more ecologically risk-oriented projects, with higher carrying-capacity limits used. At the same time the government needed to maintain its environmental conservation image to attract tourists to these large resorts, so the excellent specific initiatives outlined earlier were enacted. However, the democratic environmental input of local communities as an effective network of decision-making, management and monitoring was missing.

In the context of 'the new economy', the adoption of an IT approach is an essential prerequisite to effectively networking the small-scale tourist and environmentalist interests and empowering local communities. With such an electronic network, an ecotourism plan along the lines of the eco-sustainable framework could be developed. A recent successful local community-based example in Costa Rica is the Sky Walk-Sky Trek in the Monteverde region (Baez, 2002). Such a strategy would overcome social inequality and embed 'responsible tourism' into ecotourism. There remains the need for reasonable education of locals to drive this. In such developments, where the initial financial status of the local population is extremely low, funds need to be directed primarily to improvement of families prior to any other development activity, including ecological conservation (Silva, 2003).

The third element is the cumulative effective demand that would provide the customers to ensure the success of any ecotourist strategy. Costa Rica has the name recognition to build up strong demand, with a level of certainty developed through an established strong market share. Costa Rica, thus, enjoys a competitive advantage in ecotourism

with 5 per cent of the world's biodiversity in a small land area, the highest percentage of protected area in the world and proximity to its biggest market, North America. However, business and government actions since 1994 have sent mixed messages to tourists that have led to uncertainty, threatening name recognition. Signs of mass tourism (even with ecotourism as a 'label'), with price signals to support this (higher national park entry fees), sent sensitive low-budget ecotourists to other destinations. Costa Rica then altered its marketing strategy to fit in with more expansive mass investment activities. To prevent undermining of its conservation image, successive governments developed initiatives that enticed the new larger big-budget ecotourism end of the market. The success of this switch in commercial, ecological and social terms, from the research reported in this paper, indicates some concerns that the unique brand is being undermined.

Name recognition of a region in environmental terms establishes a niche low-budget ecotourism market. Marketing campaigns are needed to encompass a higher-budget ecotourism market. Successful high-cost ecotourism places in the world thrive on exclusivity, emphasizing differences rather than the similarities to other tourist destinations. This can, in principle, diversify the tourist potential without creating severe dilemmas in the ecotourism end of the market. Such a strategy is possible as long as the new higher-budget ecotourism market can remain distinct and with relatively small-scale ecologically sensitive operators having an effective decision-making presence, but also networked with all ecotourist interests. Evidence quoted for Costa Rica indicates that entering the ecotourism sector without the support of environment-based stakeholders and allowing huge resort-type investment projects to take advantage of the significant natural environment lead to short-term uncertainty and long-term ecologically unsustainable developments that threaten the ecotourism industry.

Conclusion

This paper developed a unique eco-sustainable framework from the work of two political economists, Adolph Lowe and Michał Kalecki, who were committed to alternative democratic forms of economic policy and planning. Working in the middle of the 20th century, both expressed nascent ecological concerns, but had not integrated them into their analytical work. Based on Courvisanos (2005), an eco-sustainable framework was outlined in this paper and then applied to Costa Rica as a significant ecotourism destination. Two conclusions can be drawn from this effort.

The first conclusion is drawn from the Lowe 'working backwards' approach, beginning with identifying an appropriate carrying-capacity measure that will deliver the long-term strategic goal of ecological sustainability. The variety of such measures indicates the need for wide community consultation to ensure the most appropriate measure is eventually accepted. In the process, governments should set social, economic and environmental goals for ecotourism in consultation with the complete range of environment-based stakeholders: ecologists, farmers, community workers and ecotourist businesses in addition to the society as a whole. Analysis of the Costa Rica experience using the eco-sustainable framework shows that, with the goal identified, and a strong broad local-based input into ecotourist strategies, policies can be designed to promote *both* economic and ecology-based sustainable ecotourism that address short-sightedness such as damage to the environment, high risk strategies and imperfect information.

The second conclusion is drawn from the Kalecki 'perspective planning' approach, such that the long-term strategic plan (identified above) is achieved through the application of short-term evolving (through trial-and-error) goals and their implementation. This approach needs to specify in the short term the turnover not only in terms of dollars

and cents but also in terms of environmental outcomes such as resources used and effluent discharged and social outcomes such as displacement of local unskilled labour and small landowners. Experiences in Costa Rica outlined in this paper, both positive and negative, serve as lessons in framing such short-term evolving goals in an ecotourist plan.

Two general premises for ecotourism can be drawn from the above analysis, but require further investigation. (1) Ecotourism needs to be developed in an ecologically sustainable manner that does not become purely market-oriented and mass tourist-based and in a way that does not displace other ecologically sustainable activities – this comes from the Lowe approach of being goal-oriented from the start and not allowing powerful business and political interests to drive the ecotourism industry. (2) Ecotourism needs to be integrated and monitored as part of a range of sustainable activities based on modern service and information-oriented industry development – this comes from the Kalecki approach to continuous re-evaluation in policy implementation. Both tasks require skill, but would overcome dilemmas and contradictions evident in Costa Rica.

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